

7

are capable of increasing the solubility of the lens protein but without detrimentally affecting and denaturing the same.

4. The process according to claim 3, wherein the acids are selected from the group consisting of lactic acid, tartaric acid, citric acid, and pyruvic acid.

5. The process according to claim 3, wherein the alkaline agents are the hydroxides of the alkali metals.

6. The process according to claim 3, wherein the salt is lithium thiocyanate.

7. The process according to claim 1, wherein in step (b) the ions of polyvalent metals are caused to diffuse into the colloidal solution.

8. The process according to claim 7, wherein the ions of polyvalent metals are selected from the group consisting of copper, cadmium, zinc, and calcium ions.

9. The process according to claim 1, wherein in step (b) hydrogen ions are caused to diffuse into the colloidal solution to form the ionotropic gel.

10. The process according to claim 1, wherein in step (b) gel formation is effected by removing the solubilizing agent by the action of an electrical field.

11. The process according to claim 1, wherein in step (b) gel formation is effected by removing the solubilizing agent by diffusion.

12. The process according to claim 1, wherein gel formation in step (b) and shaping to the desired optical body in step (c) are carried out simultaneously by placing the colloidal solution into an ion-permeable membrane of the desired shape and allowing the gel-forming ions to diffuse through said shaped membrane.

13. The process according to claim 1, wherein gel formation in step (b) and shaping to the desired optical body in step (c) are carried out simultaneously by causing the solubilizing agents to diffuse out of the sol.

8

14. The process according to claim 12, wherein the ion-permeable membrane is composed of a material selected from the group of cellulose esters, alginates, and pectinates.

15. The process according to claim 1, wherein in step (d) cross-linking is effected by immersing the shaped optical body into a dilute formaldehyde solution in polyalcohols.

16. The process according to claim 1, wherein in step (d) cross-linking is effected by immersing the shaped optical body into a dilute solution of a cross-linking agent selected from the group consisting of dialdehydes, diepoxides, and diglycidol ethers of diepoxides.

17. The process according to claim 1, wherein an agent being convertible into cross-linking agent is added during gel formation in step (b) and is converted after shaping into the cross-linking agent to cause cross-linking of the gel.

References Cited

UNITED STATES PATENTS

3,408,659 11/1968 Thiele et al. ---- 351—160UX

FOREIGN PATENTS

918,626 2/1963 Great Britain ----- 351—160

OTHER REFERENCES

Troutman, Artiphakia and Aniseikonina, vol. 56, No. 2, pp. 602—639, October 1963.

ROBERT F. WHITE, Primary Examiner

A. M. SOKAL, Assistant Examiner

U.S. Cl. X.R.

3—1, 13; 351—160, 167